Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the Commission's Rules To Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service	)	PR Docket No. 89-552 RM-8506
	)	
Implementation of Sections 3(n) and 332 of the Communications Act	)	GN Docket No. 93-252
	)	
Regulatory Treatment of Mobile Services	)	
	)	
Implementation of Section 309(j) of the Communications Act -- Competitive Bidding	)	

To: The Commission

PETITION FOR RECONSIDERATION

SEA Inc. ("SEA"), by its undersigned counsel, hereby files this Petition for Reconsideration ("Petition") in response to the FCC's Third Report and Order in the above captioned proceeding.[1/] In support, the following is shown:

I. Introduction and Statement of Interest

SEA, Inc., a wholly-owned subsidiary of Datamarine International, Inc., is a manufacturer of narrowband land mobile radio equipment. SEA has submitted comments in numerous rulemaking proceedings affecting mobile radio users, including the original

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1/ Third Report and Order and Fifth Notice of Proposed Rule Making, PR Docket No. 89-552, adopted February 19, 1997; released March 12, 1997.

Notice of Proposed Rule Making for this proceeding.[2/] Since 1981, SEA has been involved in the development of 5 kHz narrowband technology for land mobile radio users, not only at the design and manufacturing levels, but in the regulatory arena as well. SEA manufactures and markets narrowband linear modulation wireless equipment used in voice and data operations in 5 kHz wide channels on 220 MHz Private Land Mobile Radio (PLMRS) frequencies. SEA manufactures and sells type-accepted narrowband mobile, base and portable products for the 220-222 MHz frequency band.

SEA's experience in introducing systems and products into the 220-222 MHz band, as well as its unparalleled commitment to the success of this band, makes the company uniquely qualified to assess the rules adopted by the Commission in the Third Report and Order. Indeed, no other manufacturer has a track record of narrowband product development and system implementation which comes close to matching that of SEA.

In this petition, SEA takes issue with the wording of Section 90.729(b) of the rules, which sets forth restrictions for ERP and antenna height for fixed stations or paging base stations which transmit on mobile (221-222 MHz) frequencies. SEA believes that the wording selected by the Commission for this rule may lead to violations of the intent of the rule, which could cause disruptive interference. A slight modification of the rule, as suggested herein, will avoid these interference problems. SEA also recommends that a similar modification be made to Section 90.729(c), which specifies the maximum antenna height for base station transmitters operating on Channels 196-200 in the 220-222 MHz band.

2/ Notice of Proposed Rule Making, PR Docket No. 89-552, December 15, 1989.

II. The Commission Should Change the Rule Regarding The Limitation On Antenna Height For Fixed Stations Or Paging Transmitters Which Transmit In The 221-222 MHz Band

In the Third Report and Order, the Commission adopted a rule which specifies 50 watts as the maximum ERP for fixed stations and paging base stations operating in the 221-222 MHz band.[3/] At SEA's urging,[4/] the Commission also specified an antenna height limit for such transmitters. The rule adopted by the Commission, Section 90.729(b), differed from SEA's recommendation in two ways: (a) the Commission adopted an antenna height limit of 7 meters above ground level, whereas SEA had suggested an antenna height limit of 7 meters above average terrain (HAAT); and (b) the rule permits higher antenna heights as long as the ERP is reduced below 50 watts according to the formula $20*\log_{10}(h/7)$ dB.[5/]

SEA believes that allowing fixed and paging antennas in the 221-222 MHz band to be constructed at 7 meters above ground may lead to construction of systems at high elevation sites where ground level is well above the average terrain. Such a practice will certainly cause interference problems. In the extreme, the rule as adopted would allow a licensee to place such a transmitter at a site where 221-222 MHz receivers are located, resulting in intolerable interference to such receivers. Indeed, the rules can be interpreted actually to permit greater ERP from a paging station at 221-222 MHz operating at a high site than would be allowed by a standard 220-221 MHz repeater transmitter, since the

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3/ See Third Report and Order at page B-16.

4/ See Comments of SEA at 18.

5/ While SEA did not suggest this second element of the rule, SEA has no objection to it.

ERP limits of the latter are a function of HAAT. As noted above, the problem lies in referencing the allowable antenna height to ground level instead of HAAT. In this regard, SEA is aware of only one other rule where land mobile radio system antenna heights are referenced to ground elevation,[6/] i.e.; the rules for the assignment and use of frequencies in the 450-470 MHz band for low power use (formerly the rules for 12.5 kHz offset channels)[7/] require that transmitters separated 3.125 kHz from regularly assignable frequencies have ERP restrictions and that the antenna height be limited to 7 meters above ground. However, in contrast to the situation in the 220-222 MHz band, frequencies in 450-470 MHz band have been and will continue to be licensed only after approval by a frequency coordinating body to ensure against interference. There being no such coordination mechanism for the 220-222 MHz band, it follows that the use of height above ground as a reference in the 450-470 MHz band is not an appropriate precedent for using it in the 220-222 MHz band.

III. Conclusion

SEA submits that its original suggestion to limit antenna heights for such systems as covered under Section 90.729(b) by reference to height above average terrain remains

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6/ Actually, another rule governing the 220-222 MHz service contains a reference to ground elevation, and that rule, too, should be changed in the same manner and for the same reason as Section 90.727(b). Section 90.727(c), which governs transmitters that operate on base station Channels 196-200 in the 220-222 MHz band, imposes limits of 2W ERP and a maximum antenna height of 6.1 meters above ground. This rule should be modified to reference the maximum antenna height to height above average terrain. Fortunately, this anomaly in Section 90.727(c) has not as yet created any actual interference problems since there are, to the best of SEA's knowledge, no licensees currently using these channels.

7/ See 47 C.F.R. ¶ 90.267(b)(6).

the best approach. Furthermore, as noted above (see fn. 6, supra), SEA also urges the Commission to modify Section 90.729(c) so that the maximum antenna height limit for Channel 196-200 base station transmitters is 6.1 meters above average terrain. These modifications will ensure that the systems governed by these rules do not dramatically alter the interference environment of the 220-222 MHz band.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Deirdre A. Johnson, a secretary in the law firm of Verner, Liipfert, Bernhard, McPherson and Hand, Chartered, hereby certify that on this 5th day of May, 1997, copies of the foregoing "Petition for Reconsideration" were mailed postage prepaid to the following:

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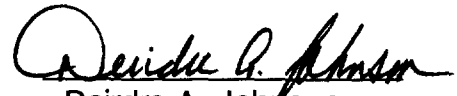

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